



DXO MARK

Media Kit – Professional & Consumer Electronics Quality Evaluation

Independent quality evaluation laboratory

DXOMARK is a French technology company and the international leader in quality assessment of Camera, Display, Audio, and Battery performance in professional and consumer electronics such as smartphones, DSLR and automotive cameras, lenses, wireless speakers, laptops, and more.

Our Vision: Meaningful Technology for Everyone

We advocate for meaningful and useful technology. Indeed, we believe that innovation should only focus on satisfying and anticipating user's needs and expectations.

Our Mission to Users

We provide users with objective and independent data based on which they can build their own opinion and choose wisely the device that best suits their needs. Our ambition is to assess how technological innovation is relevant to the user.

How we proceed?

By meticulously testing devices through rigorous, repeatable and scientific protocols, and making our findings available to manufacturers and consumers so that they can make informed choices.

Our Mission to Manufacturers

We provide OEMs with a consistent and objective benchmark to position the devices they manufacture in their competitive landscape, challenging them to upgrade their quality.

For more than 15 years, DXOMARK has been setting the industry's standards for electronic devices quality and working with all manufacturers to spur them to innovate and develop products with optimized quality for the benefit of end users.

A User-Based Approach to Evaluation

Regardless of the components used, the embedded technologies or even the selling price, all smartphones, speakers, cameras and laptops undergo our formal and specific testing procedures and analysis. DXOMARK's goal is to impartially assess the quality of the devices, and thus the end-user experience.



It all starts with the consumer!

The DXOMARK scores, trusted by the industry, reflect the device's performance and the quality of the user experience.

Our test protocols are specifically designed to be relevant:

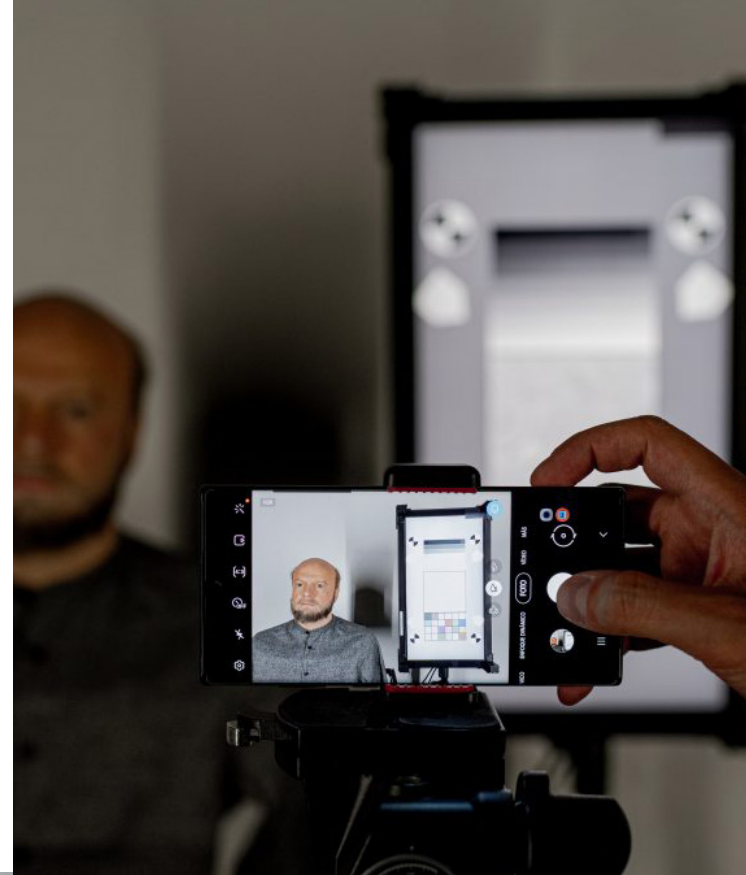
- In terms of **user-centricity** to match real usages. Indeed, DXOMARK's protocols are built to represent consumers' daily usage.
- In terms of **technology** to keep-up with the latest trends and innovation breakthroughs. We evaluate the newest technologies embedded in the electronic devices we test.

We go one step further in our mission to provide useful information to consumers. To ensure a better readability and accessibility to end-users, all our scores are now on the same scale, and our website has been re-designed to ensure smoother navigation paths and include user-friendly features and layout.

For the sake of **transparency**, the formulas used to finalize each DXOMARK score – along with the protocols' structure – are public. Now, everyone can better understand how they are built and even break them down or re-constitute them.

Scientific Approach & Cutting-edge Equipment

To meet its quality requirements, DXOMARK's team of 120 people, including a hundred highly qualified engineers, designs, operates, and optimizes 17 state-of-the-art engineering laboratories near Paris. More than 150 laboratories have been sold worldwide to smartphone manufacturers, component manufacturers and others, such as NASA. Our experts in Image, Audio, Display, and Battery quality evaluation have developed a dozen original product tests protocols.



Our business activities

1

Cutting edge proprietary laboratories

Design, production and sale of proprietary laboratories (including Image quality Laboratories called Analyzer). Close to 200 laboratories have been sold and shipped to OEMs since the creation of this activity.

2

Technical reports of prototype devices

Quality evaluation of prototype devices sent by OEMs and writing of confidential technical reports of the test results.

3

Technical reports of commercial devices

Quality evaluation of devices bought in retail stores and writing of technical reports of the tests results. Summary of the reports are published on dxomark.com, while the full results can be purchased by any party interested.

Our website: a reference guide for consumers

Accessible and Synthetic Content

Available in three languages – English, Chinese, and French -, our website aims to provide a comprehensive and relevant overview of tested devices to end-users. Filters and ranking tools allow users to easily compare the quality of devices that are available on the market, while product pages offer more in-depth information about the performance of these devices.

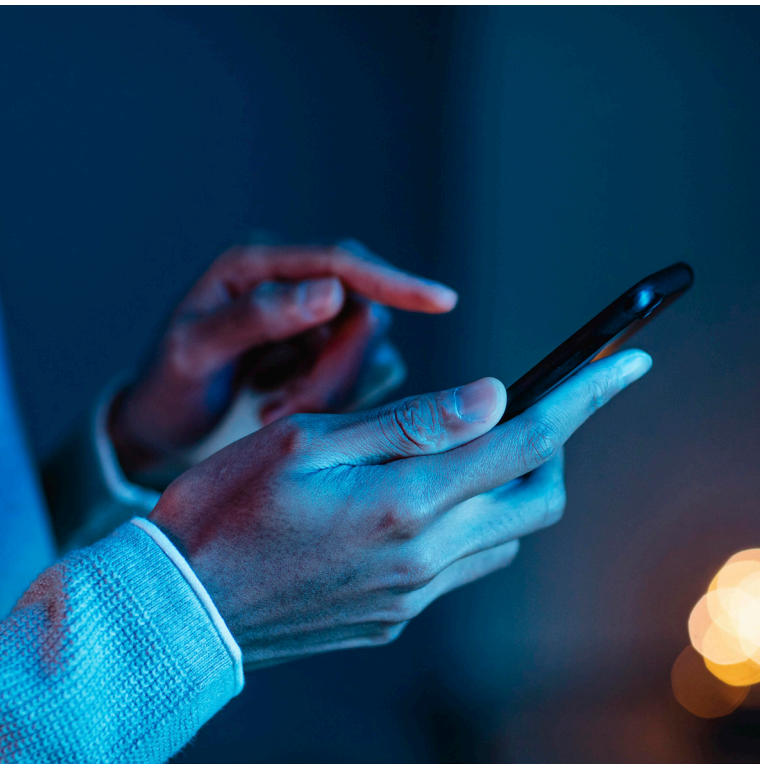
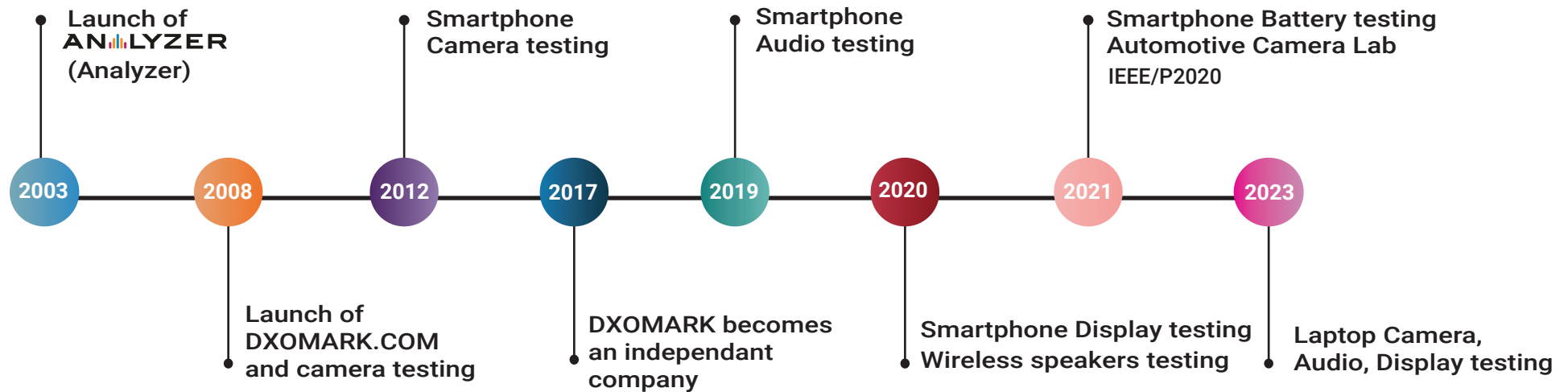
DXOMARK: Influencing the Evolution of Smartphone Photography

The 2010s marked a turning point in the quality of smartphone cameras. With more and more smartphone manufacturers providing devices whose image quality can now rival that of professional cameras.

With more than two decades of expertise in image quality solutions, DXOMARK is proud to have actively contributed to manufacturers' search for imaging excellence for the benefit of all users, and to have played a significant role in developing international standards for evaluation.



Our quality evaluation protocols



All our tests are run across different use cases in various conditions and environments in order to represent typical daily usages. They are built to reflect the device's performance, as well as the quality of the user performance.

Over the last twenty years, we have extended our range of quality evaluations, adding Audio, Display and Battery to our Camera protocol, and we have brought our expertise to new consumer and professional devices.



DXOMARK Smartphone testing protocols



MAIN CAMERA

Photo, video, zoom, preview & bokeh

Evaluated characteristics:

Photo & video: Exposure and contrast, color, autofocus, texture, noise, bokeh, night, artifacts, preview, stabilization (video only)

Zoom: Photo ultra-wide and telephoto

Preview: Photo fidelity between preview and final capture

Bokeh: Portrait photos



SELFIE CAMERA

Photo & video

Evaluated characteristics:

Photo: Exposure and contrast, color, focus, texture, noise, bokeh, flash, artifacts

Video: Exposure and contrast, color, focus, texture, noise, artifacts, stabilization



BATTERY

Autonomy, charging & efficiency

Evaluation characteristics:

Autonomy

For a full charge according to a typical usage scenario

For typical uses in mobility

For all uses in calibrated settings

Charging

Fully recharge time (100% of the battery capacity)

Recovered autonomy in a 5min charge

Efficiency

Efficiency of a charge and the residuals

Efficiency in use (battery drains for all uses)



AUDIO

Evaluated characteristics:

Timbre, dynamics, spatial, volume, artifacts, background

Measurement conditions:

Multiple contents, volumes, smartphone holding orientations

Multiple environments for recording : Urban, Home, Office

Evaluated use cases:

Sound recording:

Life video (Main camera)

Selfie video

Concert (Main camera)

Memo & Meeting (Voice recording app)

Sound reproduction:

Multiple types of content for playback (Music, Movies, Games)



DISPLAY

Readability, color, video, touch, motion & artifacts

Evaluated characteristics:

Environmental adaptability for optimal readability

Faithfulness of color reproduction

Tactile performances

HDR10 & SDR video rendering

Video framedrops & motion blur

Evaluated use cases:

Looking at pictures

Web browsing & night reading

Watching videos

Playing video games

Other testing protocols

Laptop



Two uses cases: Video call, music & video

Evaluated functions:

Camera: Exposure, artifacts, noise, texture and color

Audio: Music/Movie sound fidelity with emphasis on tonal balance, stereo wideness and dynamics ; Voice intelligibility with emphasis on noise reduction and envelope of speech

Lens/Sensor



Camera sensor:

Evaluated characteristics: Color depth, dynamic range, low-light ISO

Camera lens:

Evaluated characteristics: Sharpness, transmission, distortion, vignetting, chromatic aberration

Speaker



Evaluated characteristics: Timbre, dynamics, spatial, volume, artifacts

Evaluated uses cases:

Relaxing
Gathering
Party
Outdoor
Movies
Bed Time

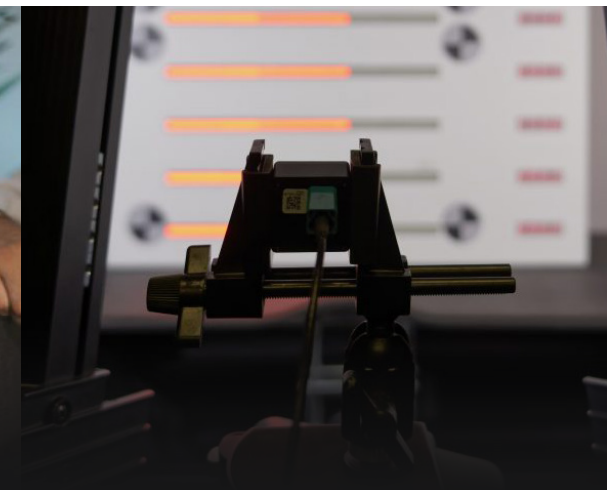
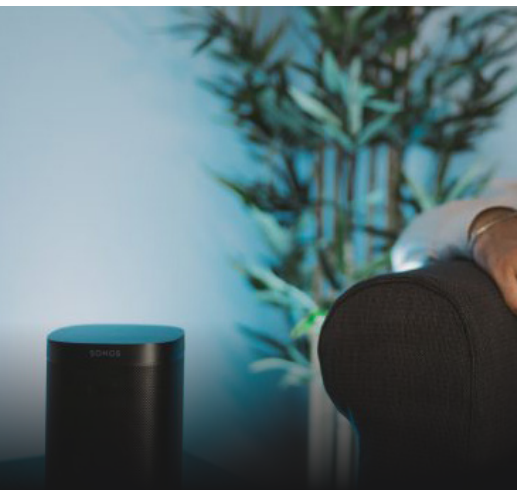
Automotive



Evaluated characteristics: Flare, noise, dynamic range, resolution, flicker mitigation, contrast performance indicator, geometry

Evaluated uses cases:

Rear-view cameras
Camera monitor systems
Surround view systems
In-cabin cameras
Computer vision cameras



On top of these devices, we also test other consumer and professional electronics, not featured on our website, such as doorbells and drones.



Contact us

About DXOMARK

Founded by engineers and researchers with a passion for photography, DXOMARK was born in the early 2000s as the image quality assessment division of DxO Labs.

DXOMARK became an independent company in 2017, focusing on assessing the quality of electronic products. It is located just outside of Paris in Boulogne-Billancourt, on the bank of the Seine river.

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